



People with Chronic Conditions

Provided by the Wisconsin Information for State Health Policy Program, a program funded by the Division of Health and the Robert Wood Johnson Foundation.

Comments and suggestions on improving the profiles may be addressed to:

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FOREWORD

Community Health Profiles: People with Chronic Conditions is the third in a series of three subject-specific profiles. These profiles were developed to provide information that will contribute to the appropriate use of long-term care services for people with chronic conditions. The first profile in the series is about pregnant women and infants; the second is about children.

The profiles evolved from a series of discussions, begun in 1992, between decision-makers in Wisconsin who met to identify key health policy issues for which information was needed. The Wisconsin Information for State Health Policy Program (InfoSHPP), which seeks to improve the availability and usefulness of health information for policy-makers in the state, was an outgrowth of those discussions.

During the early phases of InfoSHPP, local communities were recognized as the primary arenas for implementing an effective long-term care system. In response, profiles to address the need for local information were developed for 89 distinct geographical areas of the state:

- each Wisconsin county;
- each of Wisconsin's five largest cities (Kenosha, Madison, Milwaukee, Racine, and Green Bay);
- a selected group of zip codes in the city of Milwaukee;
- the five Division of Health regions; and for the state as a whole.

This profile includes information about chronic conditions (defined by selected diagnoses) which program and policy decision-makers identified as high priority. These diagnoses and the associated International Classification of Disease--Ninth Revision disease codes are listed in the Technical Notes.

Community Health Profiles: People with Chronic Conditions makes a special contribution to local health information by providing:

- a focus on the specific topic of chronic health conditions;
- information in a user-friendly format;
- information from a variety of data sources, including both population-based and program participant information;
- a narrative highlighting related *statewide* information for each table and graph;
- graphs for comparable statewide, regional and local information (statewide and regional information is shown, even when numbers are too small to present for local areas);
- comparisons between actual and expected values, based on statewide rates, for selected health measures.

Many people contributed their time and ideas through a collaborative planning process to produce these profiles. Special acknowledgment goes to the chronic conditions work group formed in connection with the Information for State Health Policy Program; the Chronic Disease Section, Bureau of Public Health, and the Bureau of Health Care Financing, Division of Health; the Bureau on Aging and the Bureau of Long-Term Support, Division of Supportive Living; the Bureau of Management and Operations, Division of Children and Family Services; the Demographic Services Center, Department of Administration; and the Office of Health Care Information, Office of the Commissioner of Insurance.

The profiles were prepared in the Center for Health Statistics. Bernie Tennis was lead research analyst for the profiles; he had primary responsibility for the content, gathering and summarizing of the data. Angela Bethel performed technical production of the profiles, including creating the tables and graphics and importing the data. Patricia Nametz provided editing and review of the profiles. Patricia Guhleman, InfoSHPP Program Coordinator, provided consultation in all phases of production. Chris Miller proofread the final reports.

The following individuals provided data and expertise: Robert Adler for data from the U.S. Census; Eleanor Cautley and Fred Krantz for data from the Family Health Survey and Behavioral Risk Factor Survey; Laura Owens for data from the hospital inpatient files; Yiwu Zhang for Home Health Survey data; Victor Jesudason for Nursing Home Survey data; Richard Betz for Community Options Program (COP), Medicaid (MA) Waiver, and Community-Based Residential Facility (CBRF) data; Laura Stevenson-Vine for Cancer Reporting System data; Ed Seiser for CBRF data; and Dan Spencer for Medicaid data.

Your comments and suggestions on improving the profiles are appreciated. Please direct them to Bernie Tennis (608-267-9090 or tennib@dhfs.state.wi.us) or Patricia Guhleman (608-267-5221 or guhlepa@dhfs.state.wi.us) at the Center for Health Statistics. On the Internet, go to: **<http://www.dhfs.state.wi.us/>** for instructions about accessing the profiles.

Requests for additional profiles should be addressed to:

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DEMOGRAPHICS

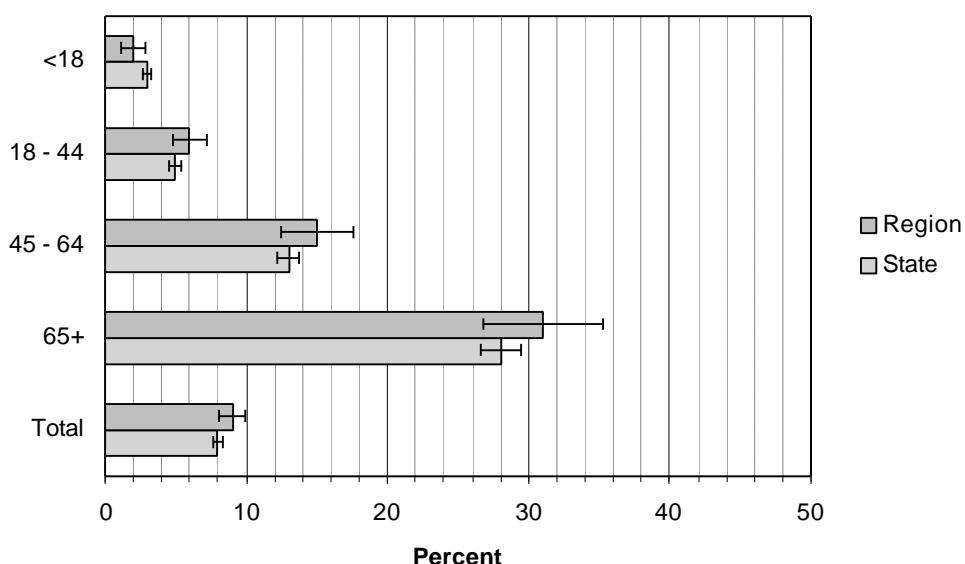
Table 1. Population by Age, 1990 and Selected Years

Age	1990	% Female	1994	2000	2010
<18	180,307	49%	183,830	179,283	172,548
18-34	178,124	50	174,530	173,588	181,016
35-44	96,008	49	102,780	101,358	88,880
45-54	62,938	50	73,760	96,638	100,474
55-64	55,351	51	54,630	61,429	93,211
65-74	52,226	54	52,000	48,170	53,754
75-84	33,350	60	35,430	35,775	33,496
85+	11,723	69	12,790	15,167	17,465
Total	670,027	51%	689,750	711,408	740,844

Source: 1990 data are from the U.S. Census of Population and Housing, Modified Age-Race-Sex (MARS) file. 1994 estimates are from the Wisconsin Center for Health Statistics. Projections for 2000 and 2010 are from the Demographic Services Center, Wisconsin Department of Administration.

Statewide, the number of people age 55 and over is expected to increase by one-third during the 20-year interval from 1990 to 2010.

HEALTH STATUS

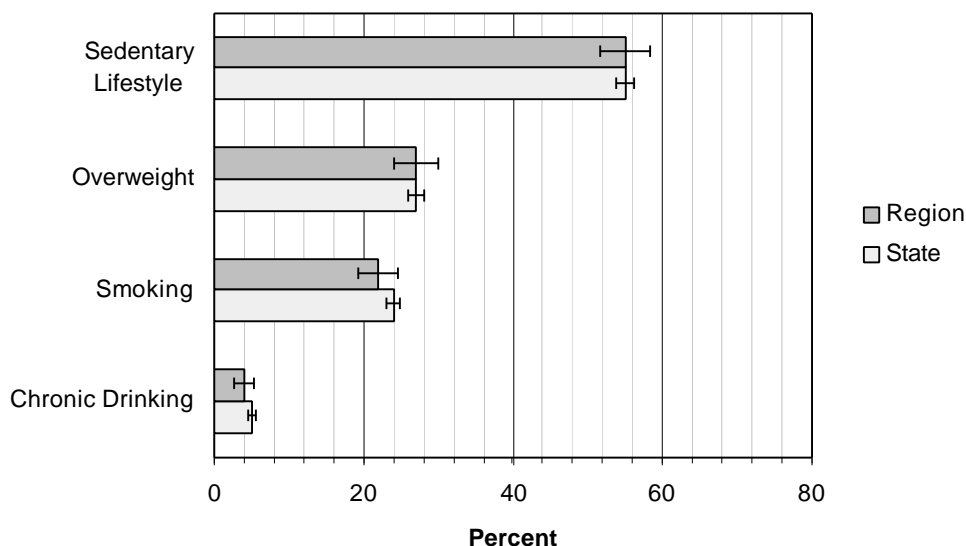
Figure 1. Percent of Persons with Fair or Poor Health

Source: Family Health Survey, 1990-1994 combined data, Center for Health Statistics.

Note: Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

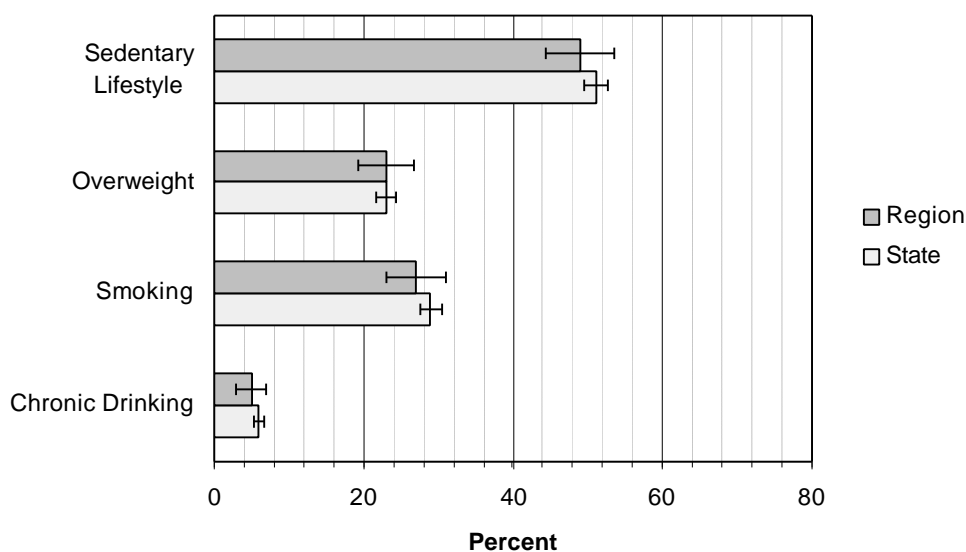
Older people are more likely than younger people to perceive their health as fair or poor. Statewide, about 28 percent of older people (age 65 and over) perceive their health as either fair or poor, compared with about 13 percent of people ages 45-64.

Figure 2a. Percent of Persons with Selected Behavioral Risks, Ages 18 and Older



About half of Wisconsin adults engage in little or no leisure-time physical activity (sedentary lifestyle), making this the most prevalent behavioral risk to health.

Figure 2b. Percent of Persons with Selected Behavioral Risks, Ages 18-44

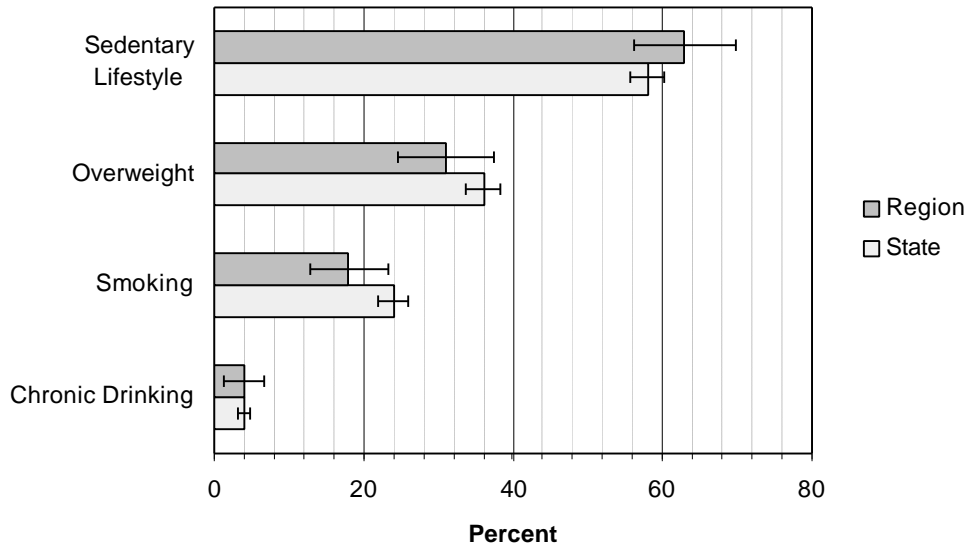


For people ages 18-44, sedentary lifestyle ranks first in statewide prevalence of behavioral risks to health; smoking cigarettes constitutes the second most common behavioral risk.

Source: Wisconsin Behavioral Risk Factor Survey, 1990-1994 combined data for all indicators except "sedentary lifestyle" (1989-1992, 1994), Center for Health Statistics.

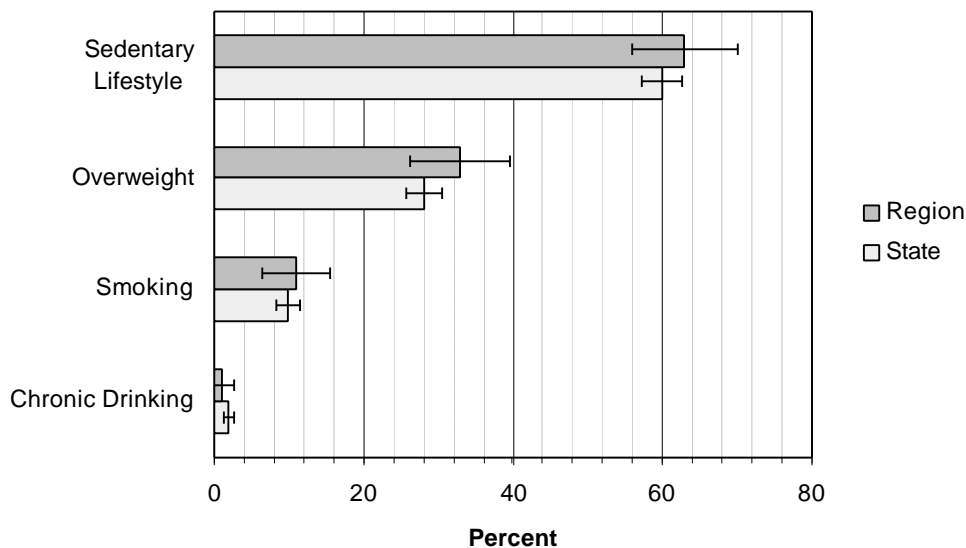
Note: See Technical Notes for definitions of behavioral risks. Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

Figure 2c. Percent of Persons with Selected Behavioral Risks, Ages 45-64



Among middle-aged people (ages 45-64), being overweight represents the second leading behavioral risk (about 36 percent statewide), and smoking ranks third (24 percent).

Figure 2d. Percent of Persons with Selected Behavioral Risks, Ages 65 and Older



Statewide, sedentary lifestyle and being overweight represent the most prevalent behavioral risks to people age 65 and over (about 60 percent and 28 percent, respectively).

Source: Wisconsin Behavioral Risk Factor Survey, 1990-1994 combined data for all indicators except "sedentary lifestyle" (1989-1992, 1994), Center for Health Statistics.

Note: See Technical Notes for definitions of behavioral risks. Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

Table 2a. Percent of Persons Reported to Have Selected Chronic Conditions, All Ages

Chronic Condition	Region Percent	State Percent
Cancer	4	3
Diabetes	3	3
Hypertension	11	11
Coronary Heart Disease	4	4
Heart Attack	2	2
Stroke	1	1
Asthma	8	8
Emphysema or Chronic Bronchitis	3	3
Arthritis	11	11
Any of the above	30	30

In Wisconsin, about 30 percent of all people report at least one chronic health condition, with arthritis and hypertension (high blood pressure) being the most frequently named conditions.

Table 2b. Percent of Persons Reported to Have Selected Chronic Conditions, by Age Groups

Chronic Condition	<65		65+	
	Region %	State %	Region %	State %
Cancer	2	2	14	13
Diabetes	1	2	10	11
Hypertension	7	8	41	41
Coronary Heart Disease	2	2	20	21
Heart Attack	1	1	11	10
Stroke	0	0	7	6
Asthma	8	8	9	8
Emphysema or Chronic Bronchitis	2	2	7	7
Arthritis	7	7	44	45
Any of the above	23	24	80	78

Statewide, about one-fourth of all people under age 65 report at least one chronic health condition, compared with more than three-fourths of all people age 65 and over.

Source: Family Health Survey, 1990-1994 combined data, Center for Health Statistics.

Note: Percent is based on persons who have ever been told by a doctor they have the listed condition.

Table 3. Actual and Expected New Cancer Cases by Site

Primary Site	Annual Average 1989-1993	1994		
		Actual	Expected	Significant Difference
Females				
Breast	459	465	476	
Colorectal	226	203	211	
Lung, Trachea & Bronchus	138	149	171	*
Cervical	156	133	118	
Other Sites	600	608	645	
All Sites	1,579	1,558	1,621	
Males				
Colorectal	237	230	233	
Lung, Trachea & Bronchus	255	267	265	
Prostate	529	458	530	**
Other Sites	665	632	699	**
All Sites	1,686	1,587	1,727	**
Total				
Colorectal	463	433	444	
Lung, Trachea & Bronchus	393	416	436	
Other Sites	2,409	2,296	2,468	**
All Sites	3,265	3,145	3,348	**

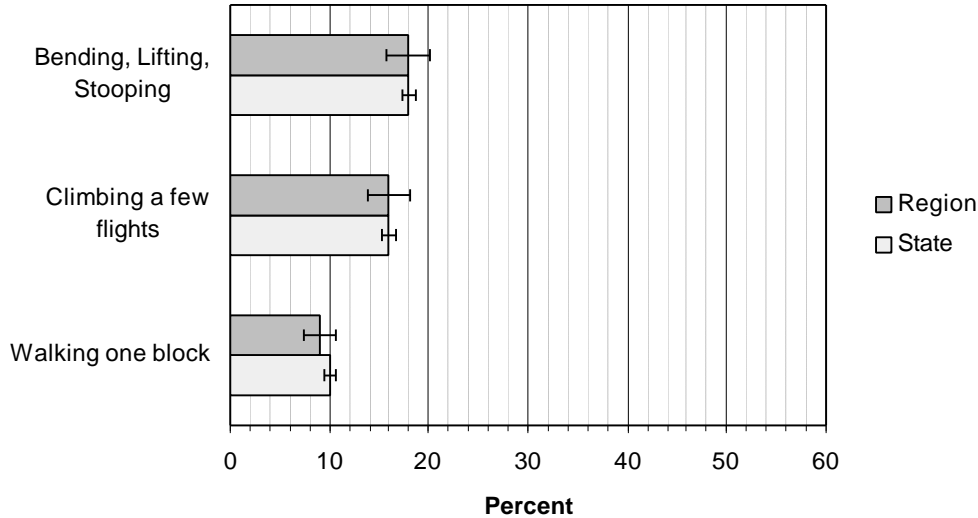
Statewide, breast cancer accounted for about one-fourth of newly reported cancers among Wisconsin women in 1994. Prostate cancer represented about 30 percent of reported cancer incidence among men.

Lung cancer and colorectal cancer each accounted for 13 percent of total cancer incidence in 1994.

Source: Wisconsin Cancer Reporting System, Center for Health Statistics.

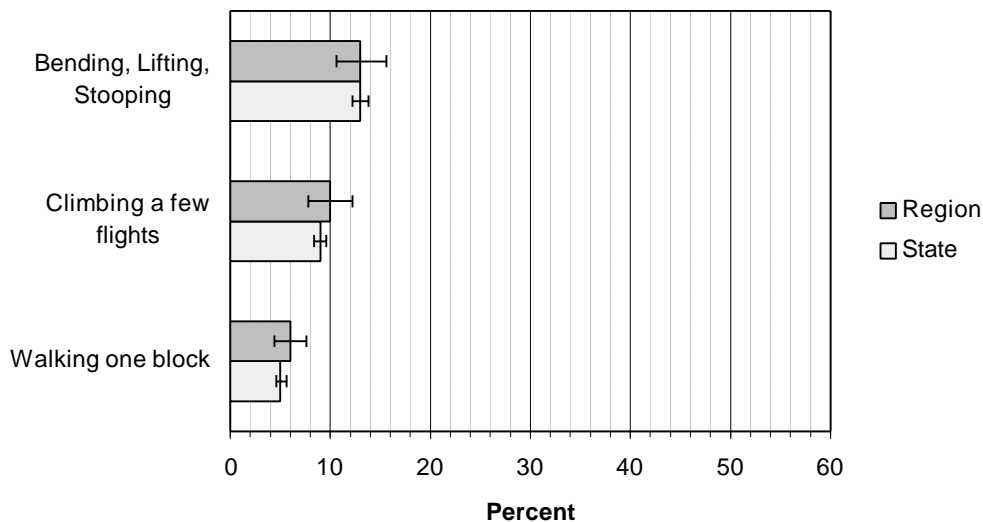
Note: The "expected" number of new cases for 1994 was calculated based on statewide cancer incidence rates by age and sex (see Technical Notes). The last column indicates where there was a statistically significant difference between the expected number of new cases in 1994 and the actual number. Two asterisks indicate significance at the .01 level and a single asterisk indicates significance at the .05 level.

Figure 3a. Percent of Persons with Reported Limitations in Physical Activity Due to a Health Condition, Age 45 and Older



Among all people age 45 and over in Wisconsin, a health condition limits physical bending, lifting or stooping for about 18 percent; climbing two flights of stairs for about 16 percent; and walking one block for about 10 percent.

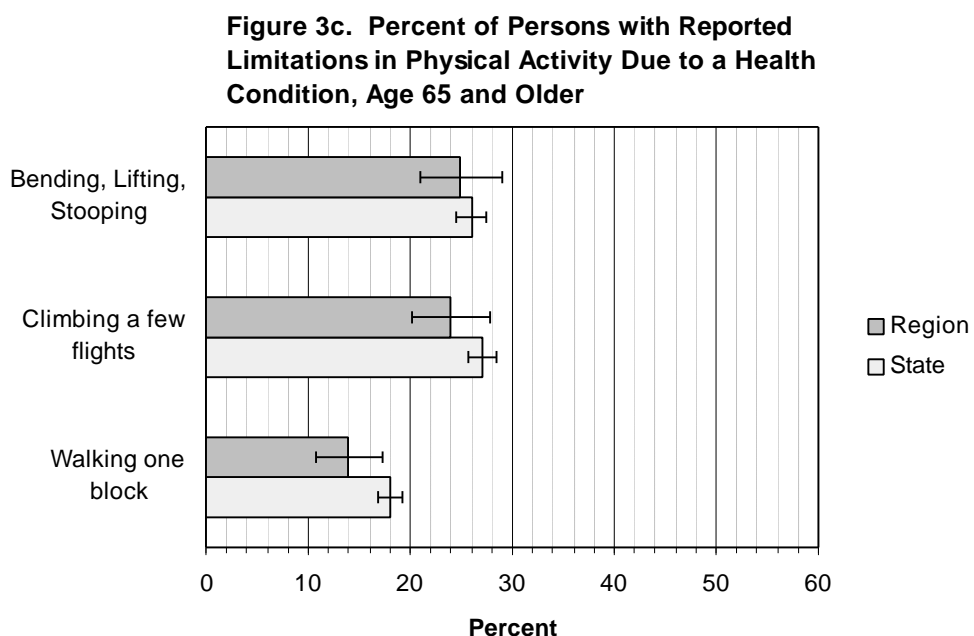
Figure 3b. Percent of Persons with Reported Limitations in Physical Activity Due to a Health Condition, Ages 45-64



Among people ages 45-64, about 13 percent statewide indicate a limitation in bending, lifting or stooping due to a health condition.

Source: Family Health Survey, 1990-1994 combined data, Center for Health Statistics.

Note: Percent is the proportion of adults whose health limits them in performing the listed activity. Range indicated on each bar represents a 95% confidence interval (see Technical Notes).



Statewide, more than one-fourth of people age 65 and over face physical limitations in climbing stairs (about 27 percent) or bending, lifting, or stooping (about 26 percent).

Source: Family Health Survey, 1990-1994 combined data, Center for Health Statistics.

Note: Percent is the proportion of adults whose health limits them in performing the listed activity. Range indicated on each bar represents a 95% confidence interval (see Technical Notes).

USE OF SERVICES

Table 4. Number of Home Health Recipients with Chronic Conditions, 1994

Age	Develop. or Phys. Disability	Mental Illness	CNS Disorder	Other Chronic Condition
<55	214	43	98	403
55-64	20	14	41	339
65-74	17	60	34	1,012
75+	25	119	67	2,059
Total	276	236	240	3,813

Source: Wisconsin Annual Survey of Home Health Agencies, Center for Health Statistics.

Note: This table provides unduplicated counts for 1994 of home health agency patients with chronic conditions; that is, patients whose primary diagnosis was a developmental or physical disability; a mental illness; a central nervous system (CNS) disorder, such as multiple sclerosis; or some other chronic condition. See Technical Notes for more detail about these categories. Counts of home health agency patients in various diagnostic categories are by *location of the agency*.

A chronic condition represented the primary diagnosis for about 29,000 clients of Wisconsin home health agencies in 1994.

Table 5. Number of Residents of Skilled Nursing Facilities (SNFs) on December 31, 1994

Age	Develop. Disability	Mental Illness	Physical Disability	All Others
<65	26	98	18	249
65-74	13	250	13	557
75-84	17	716	17	1,908
85+	3	923	9	3,059
Total	59	1,987	57	5,773

Source: Wisconsin Annual Survey of Nursing Homes, Center for Health Statistics.

Note: SNFs are nursing homes licensed to provide medical care needed to restore residents to their rehabilitation potential. This table reflects an unduplicated count of all SNF residents; the count is by *location of the facility*. All SNF residents (regardless of diagnosis) are included in this table. See Technical Notes for detail about the diagnostic categories.

In 1994, about half of all residents of Wisconsin skilled nursing facilities (SNFs) were age 85 or older.

Table 6. Number of Persons Enrolled in the Community Options Program (COP) and Medicaid Waiver Programs in 1994

Age	Frail Elderly	Develop. Disability	Mental Illness	Physical Disability	Other
<18	0	120	11	5	1
18-44	0	454	127	97	5
45-54	0	127	99	38	5
55-64	0	66	140	32	7
65-74	463	0	0	0	0
75-84	647	0	0	0	0
85+	477	0	0	0	0
Total	1,587	767	377	172	18

Source: Wisconsin Human Services Reporting System.

Note: This table provides unduplicated counts of all persons enrolled in the COP and Medicaid waiver programs (CIP2, COP-W, CIP1A, CIP1B, CSLA), which are state-supervised and county-administered programs that provide community-based services to nursing-home-eligible persons. The count in this table reflects *region of residence*. See Technical Notes for more detail about the diagnostic categories.

Statewide, about 18,000 people were enrolled in the Community Options Program or Medicaid waiver programs in 1994; about half the enrollees were under age 65.

Table 7. Number of Publicly-Funded Residents of Community-Based Residential Facilities (CBRFs) in 1994

Age	Develop. Disability	Mental Illness	Physical Disability	AODA	Other
18-44	152	159	6	278	75
45-64	96	74	6	59	13
65-74	23	22	0	5	28
75-84	7	9	0	2	59
85+	1	0	0	1	43
Total	279	264	12	345	218

Source: Wisconsin Human Services Reporting System.

Note: A CBRF is a home or facility where three or more adults live and receive supportive services in daily living, care, treatment, or protective services beyond room and board; CBRF services may not include nursing care on a permanent basis. This table provides unduplicated counts of persons whose residence in a CBRF in 1994 was publicly funded. (No counts of private-pay CBRF residents are available.) The count is by *resident's region of origin*. Fifty-two residents statewide were reported to be under 18 years of age, and were not included in this table. See Technical Notes for more detail about the resident categories.

Statewide, mental illness constituted the most prevalent primary diagnosis among residents with public funding in community-based residential facilities in 1994.

Table 8. Number of Residents of Facilities for the Developmentally Disabled (FDDs) on December 31, Selected Years

	1990	1992	1994
Total	521	511	462

Source: Wisconsin Annual Survey of Nursing Homes, Center for Health Statistics.

Note: FDDs are nursing homes licensed to provide active treatment and services to residents who are developmentally disabled, primarily due to mental retardation or cerebral palsy. This table reflects an unduplicated count of all FDD residents each year on December 31; the count is by *resident's region of origin*.

Statewide, there were about 3,400 residents in facilities for the developmentally disabled in 1994, nearly 500 fewer than in 1990.

Table 9. Number of Hospitalizations for Selected Chronic Conditions, by Age, 1994

Chronic Conditions	<18	18-44	45-64	65-74	75+
AIDS/HIV	0	8	2	0	0
Cancer					
Breast	0	26	95	88	92
Colorectal	0	10	73	117	144
Lung, Trachea, & Bronchus	0	7	74	94	73
Cervical	0	9	10	1	0
Prostate	0	2	74	79	63
Other Cancers	24	318	558	485	544
Diabetes	41	197	153	129	191
Mental Illness					
Affective Disorders	69	645	225	87	68
Schizophrenias/Psychoses	6	402	151	22	20
Anxiety/Char Dis Inc Deprsn	79	221	63	30	48
Dementias	0	3	16	41	174
Alcohol and Other Drug Abuse	147	373	83	14	10
Other Mental Illness	88	43	0	0	0
Paralysis & Cerebral Palsy	4	5	3	1	5
Hypertension	1	11	34	29	45
Congestive Heart Failure	2	26	222	484	1,233
Coronary Heart Disease	0	149	1,103	1,084	1,444
Stroke	6	48	285	501	1,062
Asthma	185	117	123	60	73
Other Chronic Lung Disease	19	36	176	316	367
Liver Disease/Cirrhosis	0	31	49	18	18
Other Chronic Condition	167	924	984	898	956
Total Hospitalizations for Chronic Conditions	838	3,611	4,556	4,578	6,630
Total Hospitalizations	12,671	19,605	11,150	10,273	16,663

Source: Office of Health Care Information, hospital inpatient database.

Note: Data are based on the principal diagnosis only. Conditions shown tend to be associated with long-term involvement with the health care system. See Technical Notes for the ICD-9-CM codes of these conditions.

Corrections to Mental Illness categories made January, 1998

Statewide, a chronic condition constituted the primary diagnosis for about 30 percent of the approximately 602,000 total hospitalizations in 1994.

Table 10. Actual and Expected Hospitalizations for Selected Chronic Conditions

Chronic Condition	Annual Average 1989-1993	1994		Significant Difference
		Actual	Expected	
AIDS/HIV	3	10	15	
Cancer				
Breast	341	301	362	**
Colorectal	371	344	387	*
Lung, Trachea, & Bronchus	228	248	282	*
Cervical	11	20	35	**
Prostate	274	218	302	**
Other Cancers	2,148	1,929	2,577	**
Diabetes	615	711	896	**
Mental Illness				
Affective Disorders	941	1,094	1,796	**
Schizophrenias/Psychoses	657	601	679	**
Anxiety/Char Dis Inc Depsn	482	441	495	**
Dementias	163	234	286	**
Alcohol and Other Drug Abuse	859	627	1,370	**
Other Mental Illness	176	131	213	**
Paralysis & Cerebral Palsy	18	18	28	*
Hypertension	106	120	110	
Congestive Heart Failure	1,988	1,967	2,273	**
Coronary Heart Disease	3,861	3,780	4,394	**
Stroke	1,803	1,902	2,127	**
Asthma	645	558	815	**
Other Chronic Lung Disease	589	914	939	
Liver Disease/Cirrhosis	92	116	146	**
Other Chronic Conditions	3,913	3,929	4,498	**
Total Hospitalizations for Chronic Conditions	20,284	20,213	25,025	**

Source: Office of Health Care Information, hospital inpatient database.

Note: Data are based on the principal diagnosis only. Conditions shown tend to be associated with long-term involvement with the health care system. See Technical Notes for the ICD-9-CM codes of these conditions. The "expected" number of hospitalizations was calculated based on statewide hospitalization rates by age and sex (see Technical Notes). The last column indicates where there was a statistically significant difference between the expected number of hospitalizations and the actual number. Two asterisks indicate significance at the .01 level and a single asterisk indicates significance at the .05 level.

Corrections to Mental Illness categories made January, 1998

Coronary heart disease, congestive heart failure, stroke, cancer and chronic lung disease accounted for more than half of all 1994 Wisconsin hospitalizations for which a chronic condition constituted the primary diagnosis.

Table 11. Hospitalizations for a Chronic Condition with a Secondary Diagnosis of Diabetes, by Principal Diagnosis, 1994

Principal Diagnosis	<55	55-74	75+	Total
Mental Illness	67	43	42	152
Coronary Heart Disease	112	428	306	846
Stroke	28	176	190	394
Chronic Lung Disease	18	65	52	135
Other Chronic Condition	193	705	547	1,445
Total	418	1,417	1,137	2,972

Source: Office of Health Care Information, hospital inpatient database.

Note: This table presents only those hospitalizations with a secondary diagnosis of diabetes for which the principal diagnosis was one of the selected chronic conditions examined. Diabetes is also associated with hospitalizations for complications not shown here, such as limb amputations and kidney failure.

About 14 percent of all hospitalizations for a chronic condition included a secondary diagnosis of diabetes.

Table 12. Medicaid-Reimbursed Health Services for People with Chronic Conditions, 1994

Services	Number of Recipients	Payment (in thousands)
Hospitalizations - Inpatient	7,439	\$26,956
Hospitalizations- Outpatient	15,648	5,876
Nursing Home	8,049	150,593
Physician	31,254	12,069
Pharmacy	31,151	24,646
Home Care	2,277	11,965
Mental Health	6,058	2,831
Therapies	2,760	1,618
Other	29,172	16,408
Total	33,692	\$252,961

Source: Medicaid Claims, Bureau of Health Care Financing.

Note: The counts in this table do not include any services provided by an HMO. "Therapies" include physical therapy, occupational therapy, speech and hearing therapy, group therapy, and comprehensive outpatient therapy provided by rehabilitation agencies. "Other" includes emergency room, durable medical equipment, lab and X-ray, dental, transportation, HealthCheck, and all other Medicaid services. See Technical Notes for list of chronic conditions and their ICD-9-CM codes.

Statewide, Medicaid paid about \$1.6 billion for services to people with chronic health conditions in 1994.

MORTALITY

Table 13. Mortality Attributed to Selected Chronic Conditions, 1994

Chronic Condition	<45	45-64	65-74	75+
HIV/AIDS	11	5	0	0
Cancer				
Breast	3	37	26	43
Colorectal	3	26	46	87
Lung, Trachea, & Bronchus	5	81	124	128
Cervical	6	2	2	3
Prostate	1	9	35	97
Diabetes	3	20	34	100
Congestive Heart Failure	0	9	18	178
Coronary Heart Disease	22	167	318	1,054
Stroke	11	26	77	384
Chronic Lung Disease	4	24	105	173
Liver Disease/Cirrhosis	9	11	11	15
Total (Chronic Conditions)	78	417	796	2,262
Total (All Deaths)	413	749	1,293	3,995

Source: Resident death certificates, Center for Health Statistics.

Note: This table reflects the underlying cause of death. Several conditions may be cited on the death certificate; one is selected using criteria established by the National Center for Health Statistics as the “underlying cause of death,” that is, “the disease or injury which initiated the chain of events leading directly or indirectly to death.” See Technical Notes for ICD-9-CM codes.

Table 14. Actual and Expected Mortality for Selected Chronic Conditions

Chronic Condition	Annual Average 1989-1993	1994		Significant Difference
		Actual	Expected	
HIV/AIDS	9	16	26	*
Cancer				
Breast	118	109	123	
Colorectal	177	162	168	
Lung, Trachea, & Bronchus	345	338	355	
Cervical	6	13	8	
Prostate	119	142	126	
Diabetes	145	157	156	
Congestive Heart Failure	156	205	170	**
Coronary Heart Disease	1,736	1,561	1,578	
Stroke	488	498	523	
Chronic Lung Disease	302	306	313	
Liver Disease/Cirrhosis	46	46	46	
Total	3,647	3,553	3,592	

Source: Resident death certificates, Center for Health Statistics.

Note: This table reflects the underlying cause of death (see note, Table 13). The “expected” number of deaths was based on statewide mortality rates by age and sex (see Technical Notes). The last column indicates whether there was a statistically significant difference between the expected number of deaths and the actual number. Two asterisks indicate significance at the .01 level and a single asterisk indicates significance at the .05 level.

In 1994, chronic conditions accounted for about half (24,390) of all Wisconsin deaths.

Statewide, coronary heart disease represented the leading cause of death due to a chronic health condition in 1994.

Technical Notes

The regions used in this report reflect the uniform Department of Health and Family Services boundaries which became effective July 1996.

A blank column in a table and the absence of a bar in a figure indicate either that data are not available for a given geographic level, or that a stable estimate could not be calculated.

Chronic Conditions. As defined in *Chronic Disease Epidemiology and Control* (American Public Health Association, 1993), chronic conditions are those that have a prolonged course, that do not resolve spontaneously, and for which a complete cure is seldom achieved. These conditions are generally characterized by uncertain etiology, multiple risk factors, a long latency period, a prolonged course of illness, non-contagious origin, and functional impairment or disability. The conditions analyzed in this profile include the following diagnoses and their ICD-9-CM codes:

- HIV (042-044)
- Cancer (140-239)
 - Breast (174-175)
 - Cervical (180)
 - Colorectal (153-154)
 - Lung, Trachea, & Bronchus (162)
 - Prostate (185)
 - Leukemia (204-208)
 - Other (140-152, 155-161, 163-173, 176-179, 181-184, 186-203, 209-239)
- Diabetes (250)
- Mental Disorders
 - Dementias (290-290.43, 291.1, 291.2, 292.82, 292.83, 294.0, 294.1)
 - Alcohol and Other Drug Abuse (291.0, 291.3, 292.0, 292.11, 292.84, 303.90, 304-304.90, 305-305.90)
 - Schizophrenias / Psychoses (293.81, 293.82, 295.10-295.35, 295.60-295.95, 297.1-297.3)
 - Affective Disorders (293.83, 296.2-296.7)
 - Anxiety / Character and Miscellaneous Disorders (294.8, 294.9, 300.00-300.13, 301.00-301.82, 300.15-300.9, 301.84-301.9, 302.71-302.79, 306.51-307.0, 307.20, 307.21, 307.23-307.47, 307.80, 310.10, 780.52-780.54)
 - Other Chronic Mental Disorders (300.14, 301.83, 307.1, 307.50-307.51, 299.00, 299.80, 307.22, 307.23, 307.52-307.7, 312.00-312.23, 313.82, 314.00, 314.01, 315.9)
- Mental Retardation (317-319)
- Alzheimer's Disease (331.0)
- Parkinson's Disease (332)
- Multiple Sclerosis and Other Diseases of the Central Nervous System (320-330, 331.1-331.9, 333-341)
- Paralysis & Cerebral Palsy (342-344)
- Glaucoma (365)
- Cataracts (366)
- Congestive Heart Failure (428, 402.01, 402.11, 402.91)
- Hypertension (401, 402.00, 402.10, 402.90)
- Coronary Heart Disease (410-414, 429.2)
- Stroke (430-438)
- Liver Disease / Cirrhosis (571)
- Emphysema and Chronic Lung Disease (490-496, 500-504, 506, 507.8, 515-517), includes Asthma (493)
- Arthropathies, Dorsopathies, & Rheumatism (710-729), includes Arthritis (710-719)
- Osteopathies (730-739), includes Osteoporosis (733)

Family Health Survey. The Wisconsin Family Health Survey (FHS) is a statewide telephone survey using a stratified random sample of households in Wisconsin. One person in each household, who is most knowledgeable about the health of household members, answers the questions on behalf of all household members. Interviews are conducted each month of the year; a total of about 2,400 households are surveyed annually. Completed interviews are weighted to represent nonrespondents and to correct for disproportionate sampling rates across regions. The completed sample is considered to be representative of the Wisconsin household population, although it does not include any households without telephones and minority populations are somewhat underrepresented.

Confidence intervals. Figures using FHS data contain error bars at the end of each graph bar, indicating a 95% confidence interval. That is, there is a 95% chance that the actual percentage falls within the range indicated by the error bar. Tables 2a and 2b have a column labeled (+/-) that contains the 95% confidence interval associated with each county value.

Sample size. For all of the FHS analyses in this report, data from five years (1990-1994) were combined. This was done to provide more stable estimates at the county and regional levels for the age groups being considered. The confidence associated with estimates varies with the size of the sample used to produce the estimates. For example, estimates based on a sample of 200 might vary by as much as (plus or minus) 7 percent. In these profiles, FHS estimates are not available below the county level, except for the city of Milwaukee.

Behavioral Risk Factor Survey. The Wisconsin Behavioral Risk Factor Survey (BRFS) is a statewide telephone survey using a stratified random sample of households in Wisconsin. One adult is randomly selected from each household to be interviewed. Interviews are conducted each month of the year; a total of 1,500-2,100 households are surveyed annually. Completed interviews are weighted to represent nonrespondents and to correct for disproportionate sampling rates across regions. The completed sample is considered to be representative of the Wisconsin household population, although it does not include any households without telephones and minority populations are somewhat underrepresented.

Confidence intervals. See above discussion of confidence intervals.

Definition of behavioral risks. Figures 2a-2d show four health risks: (1) Sedentary lifestyle is defined by no leisure-time physical activity, or activities done for less than 20 minutes or fewer than 3 times per week. (2) Overweight is determined by a body mass index (weight in kilograms divided by height in meters squared) of 27.3 or greater for women and 27.8 or greater for men. (3) Smokers are those who smoke currently and have smoked more than 100 cigarettes in their lifetime. (4) Chronic drinkers are those who report consuming 60 or more drinks in the previous month. The Centers for Disease Control and Prevention defined these behavioral risk standards.

Sample size. Figures 2a-2d use combined data from five years of the survey to provide more stable estimates at the county and regional levels for the age groups being considered. Data from 1989-1992 and 1994 were used for sedentary lifestyle; 1990-1994 data were used for the other risks. The reader should be aware that the confidence associated with estimates varies with the size of the sample used to produce the estimates. For example, estimates based on a sample of 200 might vary by as much as (plus or minus) 7 percent. In these profiles, BRFs estimates are not available below the county level.

Cancer Reporting System. Table 3 is based on reported cancer cases from Wisconsin hospitals and clinics, out-of-state cancer registries, and Minnesota hospitals near the state border. Data are for Wisconsin residents only.

All malignant neoplasms (except basal cell carcinoma and squamous cell carcinoma which arise in the skin) are reportable to the Wisconsin Cancer Reporting System per state statute (255.04). Only newly diagnosed cases of primary tumor sites for a particular calendar year are included in the incidence count for that year.

The colorectal cancer group includes the following sites: colon, rectum, rectosigmoid junction, anus and anal canal.

Actual and Expected Values. Tables 3, 10 and 14 present actual and expected values for cancer incidence, hospitalizations and mortality, and indicate whether the differences are statistically significant. In this profile, the statewide age- and sex-specific rates for each event (i.e., site-specific cancer incidence, cause-specific hospitalizations and cause-specific mortality) are used as the “standard” against which each community is compared. CHS calculated the sex-specific rates for each chronic condition in five-year age increments, and applied these rates to the community’s population to produce an expected number of cases in the community.

Actual values are affected by the age and sex distributions within the community. For example, because the risk of cancer increases with age, a higher than average number of cancer cases is usually found in communities whose proportion of elderly is greater than the state’s. If the community is similar to the state in terms of age and sex distribution, a higher-than-expected number of cancer cases is probably due to factors other than age and sex.

The statistical test of significance indicates the probability that the difference did not occur by chance. In any statistical test, sample size can strongly influence the results. In large communities, smaller numerical differences may be statistically significant, whereas in smaller communities, large numerical differences might not meet the statistical test of significance. For this reason, the tests of significance should not be used to compare communities. Each community should evaluate both its actual and its expected values in developing intervention priorities.

Home Health Survey. The Wisconsin Home Health Survey is an annual survey of all home health agencies providing services to Wisconsin residents. Table 4 presents the number of patients reported, based on principal diagnosis. Diagnosis categories include slightly different groupings, depending on which survey form the agency used.

Category	Conditions and ICD-9-CM Diagnostic Codes
Developmental or Physical Disability	Mental Retardation (317-319), Paralysis and Cerebral Palsy (342-344)
Mental Illness and AODA	Senile Dementia (290), Mental Illness (291-302, 306-316) and Alcohol and Other Drug Abuse (303-305)
Central Nervous System	CNS disorders (320-341) or Multiple Sclerosis only (340-341)
Other Medical Conditions	HIV/AIDS (042-044), Cancer (140-239), Diabetes (250), Stroke (436-438), Respiratory Diseases (460-519) Arthropathies, Dorsopathies, and Rheumatism (710-729) or Arthritis (710-719) Osteopathies (730-739) or Bone Degeneration (730-733)

Nursing Home Survey. The Wisconsin Annual Survey of Nursing Homes is a survey of all facilities licensed to provide nursing care in Wisconsin. Patient counts in Table 5 present skilled nursing facility residents on December 31, 1994 by principal diagnosis.

Category	Conditions and ICD-9-CM Diagnostic Codes
Developmental Disabilities	Mental Retardation (317-319), Cerebral Palsy (343) Epilepsy (345), Autism (299), other developmental disabilities
Mental Disorders	Alzheimer's (331,290.1), Mental Illness (291-302, 306-316), Alcohol and Other Drug Abuse (303-305)
Physical Disabilities	Paraplegia (344.1-344.9), Quadriplegia (344), Hemiplegia (342)
Medical Conditions	Cancer (140-239), Fractures (800-839), Cardiovascular (390-429, 439-459), Cerebrovascular (430-438), Diabetes (250), Respiratory Diseases (460-519), and other medical conditions

Human Services Reporting System. The Wisconsin Human Services Reporting System (HSRS) tracks state-funded social services administered by counties. Community Option Program and Medicaid waiver clients are classified according to program requirements, which include assigning all clients over age 65 to the “frail elderly” category, meaning a fragile state of health related to multiple age-associated conditions. All other clients and community-based residential facility (CBRF) residents are categorized by primary diagnosis as follows:

Category	Condition and HSRS Code
Developmental Disabilities	DD codes 19, 23, 25, 26, 27, 28
Mental Illness	Mentally Ill (02), Chronically Mentally Ill (03), and Severely Emotionally Disturbed (86)
Physical Disabilities	Blind/Visually Impaired (07), Hearing Impaired (08), Physically Disabled/Mobility Impaired (09), Alzheimer’s (18)*, Other Physical Disability (38)
Other	All other clients

* COP and Waiver Programs only; does not apply to CBRF residents.

CBRF counts. CBRF data are unavailable for Burnett, Eau Claire, Iowa, Milwaukee, Monroe, Portage, Washburn, and Washington counties, and residents are significantly undercounted in Barron, Brown, Forest, Kenosha, Langlade, Lincoln, Manitowoc, Marathon, Oneida, Polk, Rusk, and Vilas counties. Residents are also slightly undercounted in Buffalo, Door, Douglas, Green, Juneau, Kewaunee, Marinette, Menominee, Oconto, Ozaukee, Racine, Richland, Sauk, and St. Croix counties. Regional and statewide CBRF residents are also undercounted.

Hospitalizations. The hospital findings presented in this profile are based on data extracted from each hospital's Uniform Billing Record (UB-82 or UB-92) and submitted to the Office of Health Care Information. The categories are defined by the chronic disease diagnosis codes listed on the first page of these Technical Notes. Unless otherwise noted, hospitalizations by cause reflect the first-listed diagnosis at discharge. Table 9 is based on all hospitalizations for chronic conditions of Wisconsin residents discharged in 1994. Table 10 is based on all such discharges from 1989 to 1994.

No data were available for Wisconsin residents hospitalized in other states. Caution is therefore advised when analyzing hospitalizations for residents of border counties. The counties most affected by this care pattern are: Ashland, Barron, Bayfield, Buffalo, Burnett, Douglas, Dunn, Florence, Grant, Iron, Marinette, Pepin, Pierce, Polk, St. Croix, and Washburn. If more complete data were available, the number of hospitalizations for residents of these counties would probably be higher.

Mortality. The conditions listed in Tables 13 and 14 are defined by the chronic disease diagnosis codes listed on the first page of these Technical Notes.